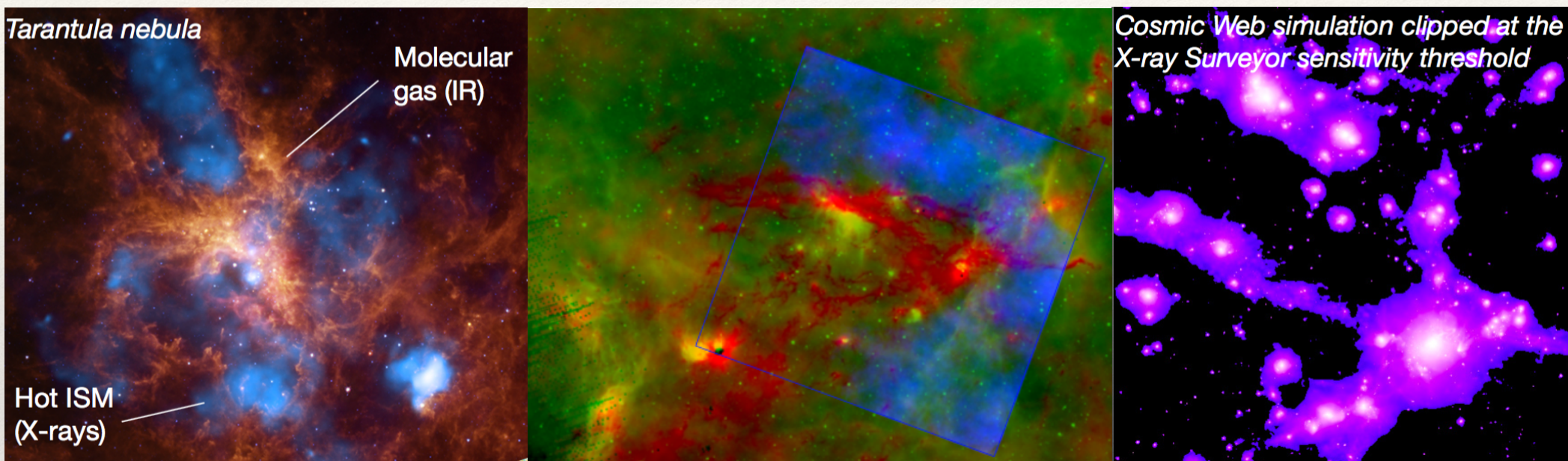


X-ray Surveyor



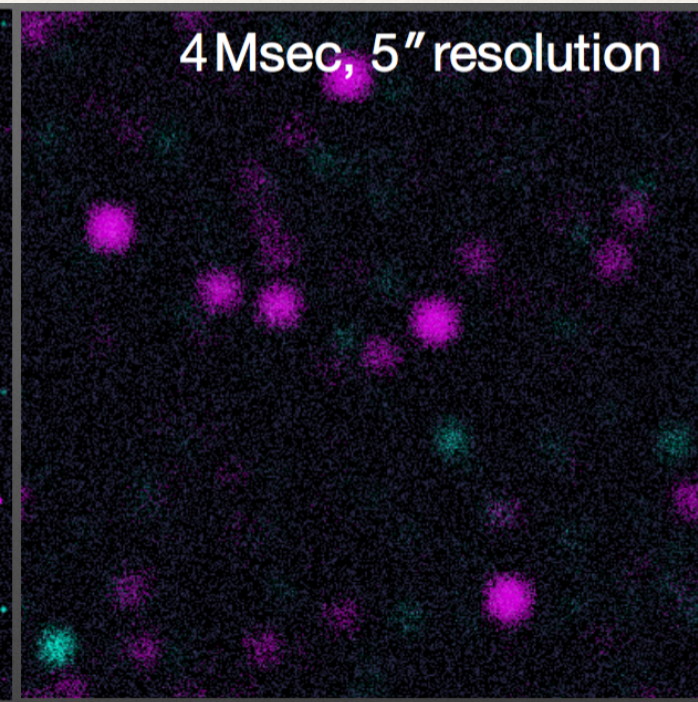
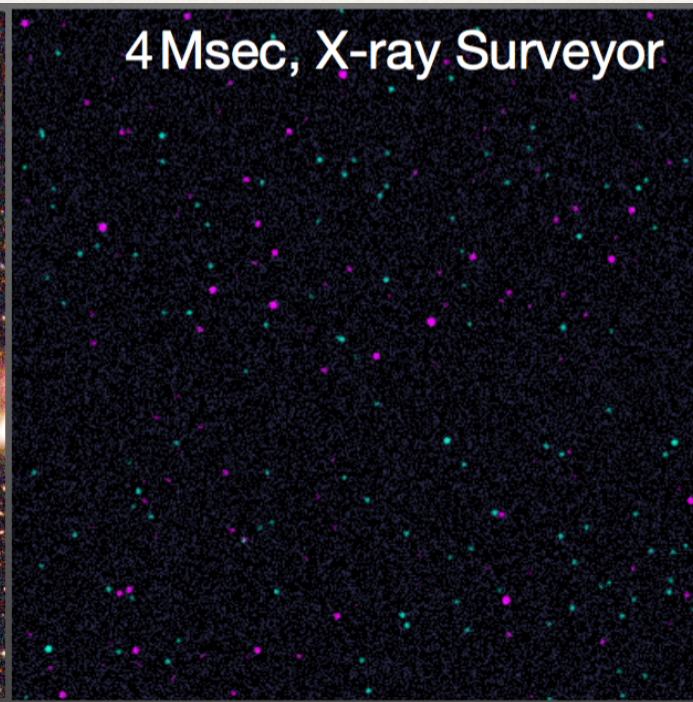
*Science and Technology Definition Team
Face-to-face Meeting
Center for Astrophysics, Cambridge, MA
July 25, 2016*

I. Define Exciting Science

- ❖ Our SWGs are in place: Are we missing science topics?
- ❖ Beef up our SWG membership: Are we missing expertise?
- ❖ Work towards making the science goals broad and exciting: involve multi-wavelength partners
- ❖ Make our science requirements **compelling**

Examples of *Compelling*

First Accretion Light



make it VISUAL

Examples of *Compelling*

Starburst Galaxies: Outflows of Metals and Energy into the IGM

A White Paper for the Astro2010 Decadal Survey

David K. Strickland (Johns Hopkins University)

Ann Hornschemeier (NASA/GSFC)

Andrew Ptak (Johns Hopkins University)

Eric Schlegel (University of Texas – San Antonio)

Christy Tremonti (MPIA & U. Wisconsin)

Takeshi Tsuru (Kyoto University)

Ralph Tüllmann (Harvard)

Andreas Zezas (Harvard)

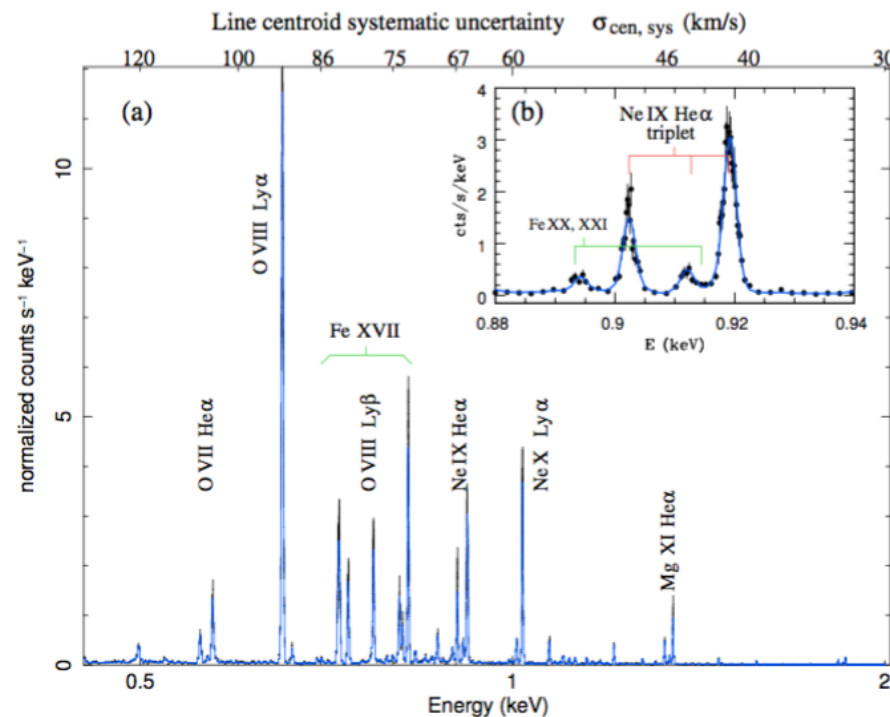
Examples of *Compelling*

A Technical Supplement for the
**Starburst Galaxies: Outflows of Metals and
Energy into the IGM**

Astro2010 White Paper

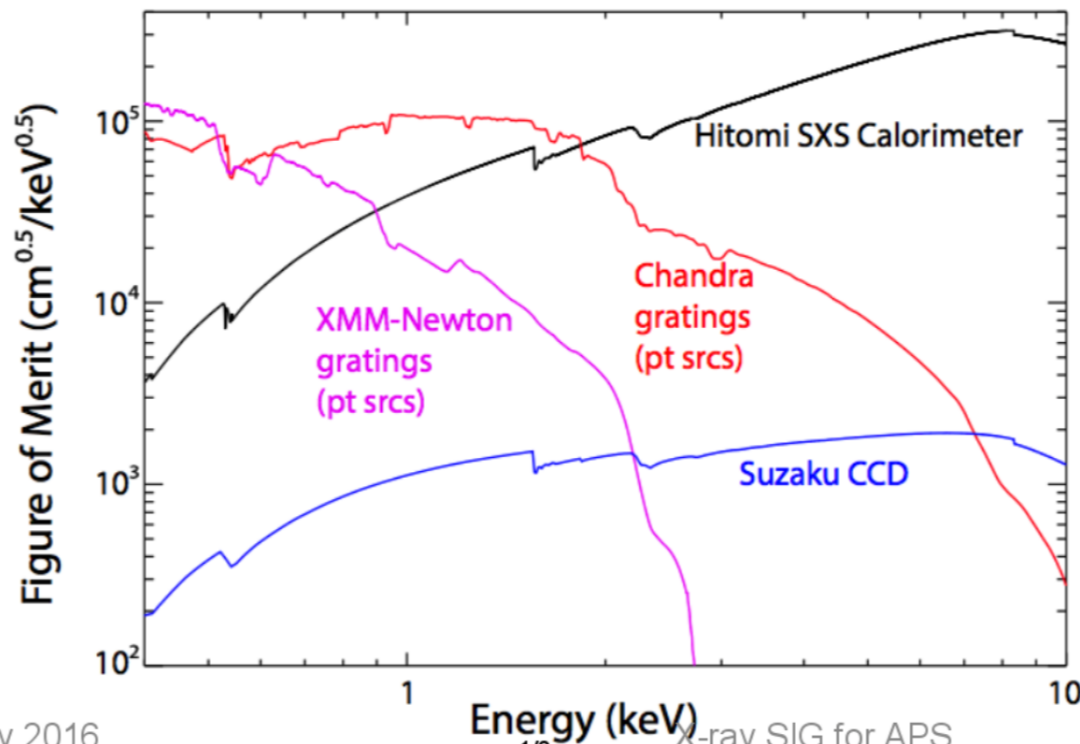
David K. Strickland (Johns Hopkins University)

make it DETAILED



Examples of *Compelling*

Figures of Merit



~100x better velocities in clusters, SNR, starburst galaxy flows

~50x better velocities in AGN, stars via K shell transitions of S, Ar, Ca, Fe and Ni

21 July 2016
FoM for weak-line velocity $M \equiv (E/\Delta E)(A_{\text{eff}}/\Delta E)^{1/2}$ X-ray SIG for APS

from Mark Bautz

make it QUANTITATIVE

Suggestions/Action Items

- ❖ White papers for the technical details
- ❖ Don't have to start from scratch: look into IXO white papers, Hitomi, Athena etc.
- ❖ Reach out to SWGs and broader community for simulations, multiple angles of attack, capabilities
- ❖ Use PhysPAG/COPAG for gaps in our expertise and time; initiate studies (Note: COPAG appointed Joe Lazio and Suvi Gezari to XRS)

II. Technology: Define Mission Design & Support Technology Development

- ❖ Add *Cost* and *Risk* to find sweet spot and identify technology needs; identify “truly required” components
- ❖ Optics Working Group: Leadership and Charter close to final; Lead: Mike Pivovarovoff
- ❖ Instrument Working Group: Leadership and Charter getting there; Lead: Mark Bautz
- ❖ Have to work on Mission Definition and Technology Development in parallel because of time constraints

III. Get the word FAR out

- ❖ **ACTION ITEM:** Each STDT member to think of names outside of “traditional X-ray community” for xrs-news mailing list, WG memberships, targeted emails, & invited talks and collate in a google doc
- ❖ Start with PIs of Chandra joint programs, people joining Hitomi discussions, collaborators in other wavelengths...
- ❖ Leverage other capabilities: Anyone willing to attend upcoming JWST meetings?

III. Get the word FAR Out

- ❖ Get help from PCOS office for advertising and outreach
 - ❖ **ACTION ITEM:** Decide on AAS splinter session, informational materials (e.g., thumb drives, mouse pads, brochures...?)
- ❖ Bi-weekly seminars/webinars
 - ❖ **ACTION ITEM:** Make a schedule for August 2016 — February 2017
- ❖ Colloquia: All STDT members encouraged to give XRS talks and colloquia

III. Get the word FAR out

- ❖ Increase interactions with other STDs, explore synergies and collaborations
- ❖ **ACTION ITEM:** Take turns between the members of the STD to participate in the meetings of other STDs and write minutes for the rest of the team (that amounts to one turn every 14 weeks or so — and less if Dan Stern helps with HabEx!)
- ❖ Sign up for a date.

IV. Participate in Policy

- ❖ We should consider advocating for our science at the congress level
- ❖ X-ray Vision; the Beautiful X-ray Universe; X-rays and defense
- ❖ 2016 Leadership Seminar in Science and Technology Policy, November 14-18, Washington DC
Anyone willing to go?